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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/032,863	03/02/1998	GORDON F. GRIGOR	0100.01117	1397

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EXAMINER

NGUYEN, KEVIN M

ART UNIT

PAPER NUMBER

2674

DATE MAILED: 11/30/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

**SUPPLEMENTAL
Office Action Summary**

Application No.

09/032,863

Applicant(s)

GRIGOR ET AL.

Examiner

Kevin M. Nguyen

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24,29-33 and 38-55 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 24,29-33 and 38-55 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

SUPPLEMENTAL DETAILED ACTION

1. The finality of the previous Office action filed on 8/14/2001 is hereby withdrawn. Applicant's the amendment filed on 6/4/2001 is entered. The rejections of claims 24, 29-32, 33, 38-55 are maintained.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 24, 29-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kou (US 5,874,928) in view of Zenda (US 5,559,525).

As to claims 24 and 29-32, Kou teaches a video graphics processing circuit 10, host computer 12 consists of a processing unit, display memory 36 and frame buffer 48 corresponding to the claimed a plurality of screen memories (figure 2), host computer 12 consists of a processing unit, video buffer 38, write buffer 45, and read buffer 50 corresponding to the claimed a digital storage medium and memory stores programming instructions (figure 2, column 4, lines 64-67), which includes host computer 12 to receive, manipulate, and store the graphics data is ready to be converted into video signals which can be used to drive the display 18a-18n CRT and LCD (figure 1, column 6, lines 20-26). It would have been obvious to a person of ordinary skill in the art to recognize that Kou discloses as recited in claims 24 (a) "receive display preferences regarding at least one of a multiple displays as claimed.

Therefore, Kou teaches all of the claimed limitation of claim 24, except for claim 24 (b) and claim 24 (c). However, Zenda (5,559,525) teaches a portable computer control system which includes keyboard KB (figure 23A, col. 14, lines 24-32), the expansion slot of the computer corresponding to the claimed the coupling controller (see fig. 2A, 2B, col. 7, lines 34-38), the entire configuration of the computer (column 6, lines 45) corresponding to the configuration properties of the claimed. Zenda (5,559,525) teaches the first display controller 87 is incorporated (figure 3A, column 7, lines 45) and outputs display data P7-0 to be connected RAMDAC 93 and displayed on the color LCD panel 91 (figure 3A column 7, lines 46-67), the second display controller 109 outputs display data to be connected RAMDAC 111 and displayed on the color CRT display unit 107 (figure 3A, column 9, lines 13-15) corresponding to the claimed the plurality of screen memory, a first display controller 87 and a second display controller 109 (figure 3A) corresponding the claimed a plurality of display drivers. It would have been obvious to a person of ordinary skill in the art to recognize that Kou discloses as recited in claims 24 (b) and claim 24 (c) as claimed (by virtue of the operation described at col. 7, lines 31-67 to col. 8, lines 1-56). It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to provide the additional keyboard taught by Zenda in the host computer for multiple display of Kou's system because this would allow the user to select two or more display devices.

As to claims 33 and 38-41, Kou discloses a computer control system which inherently includes a digital storage medium for storing programming instruction as

recited in claim 33 "first means, second means, third means and fourth means for storing programming instructions... the plurality of screen memories" as claimed.

As to claims 42-48, Kou teaches a video graphics processing circuit 10, host computer 12 consists of a processing unit, display memory 36 and frame buffer 48 corresponding to the claimed a plurality of screen memories (figure 2), host computer 12 consists of a processing unit, video buffer 38, write buffer 45, and read buffer 50 corresponding to the claimed a digital storage medium and memory stores programming instructions (figure 2, column 4, lines 64-67), which includes host computer 12 to receive, manipulate, and store the graphics data is ready to be converted into video signals which can be used to drive the display 18a-18n CRT and LCD (figure 1, column 6, lines 20-26). It would have been obvious to a person of ordinary skill in the art to recognize that Kou discloses as recited in claims 24 (a) "receive display preferences regarding at least one of a multiple displays as claimed. Therefore, Kou teaches all of the claimed limitation of claim 42, except for coupling module and a coupling controller. However, Zenda (5,559,525) teaches a switch circuit (93, 97, 101, ZENSEN), connected to the first graphics subsystem (87, 93), the connectors (103, 105) and the second graphics subsystem (109, 111), for supplying the data from either the first graphics subsystem or second graphics subsystems to the flat panel display unit means (91, 95); wherein the switch circuit (93, 97, 101, ZENSEN) supplies the data from the second graphics subsystem (109-113) to the flat panel display unit means (91, 95) when the second graphics subsystem (109-113) is connected to the portable computer (see col. 3, lines 9-19). It would have been obvious

to one of ordinary skill in the art at the time of the claimed invention to provide a switch circuit taught by Zenda in the multi display Kou's system in order to switch the operation of the first graphics subsystem to that of the second graphics subsystem or vice versa (see abstract of Zenda).

As to claims 49-55, Zenda (5,559,525) teaches a switch circuit (93, 97,101, ZENSEN), connected to the first graphics subsystem (87, 93), the connectors (103,105) and the second graphics subsystem (109, 111), for supplying the data from either the first graphics subsystem or second graphics subsystems to the flat panel display unit means (91, 95); wherein the switch circuit (93, 97,101, ZENSEN) supplies the data from the second graphics subsystem (109-113) to the flat panel display unit means (91, 95) when the second graphics subsystem (109-113) is connected to the portable computer (see col. 3, lines 9-19). It would have been obvious to a person of ordinary skill in the art at the time of the invention to recognize that Zenda discloses the images, which defined by data, and signals supplied from the different graphics subsystem can be displayed on a flat panel display unit switchingly or alternatively. Additional advantages and modifications will readily occur to those skilled in the art. Therefore, the invention in its broader aspects is not limited to the specific details, and representative devices shown and described herein. Accordingly, various modifications may be made without departing from the spirit or scope of the general inventive concept as defined by the appended claims and their equivalents (see col. 15, lines 6-15 of Zenda).

4. Claims 24, 29-33 and 38-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caine (US 5,361,078).

As to claims 24 and 29-32, Caine teaches a plurality of display cards 50 corresponding to the claimed a plurality of display controllers (figure 2), the four SRAMs 22A to 22D (a plurality of screen memories) are assigned to four video channels and connected to four corresponding video drivers 24A to 24D (a plurality of display controllers) (col. 2, lines 53-55), the status register 36 corresponding to the claimed a coupling controller (col. 3, lines 7-11). Caine further teaches a host computer 10 and a keyboard 12 corresponding to the claimed a processing unit (col. 3, lines 1-6) to (a) receive display preferences regarding at least one of a multiple displays; (b) determine whether the display preferences can be fulfilled in observance of at least one of: configurationfulfilled; and (c) configure the computing systemwhen the current configuration can be reconfigured. Regardless of such considerations, it will be appreciated that the number of images stored, how they are sequenced and whether and how the displayed information on the screens relates from screen to screen are all under control of the host computer, more especially via the status register or registers 36 (col. 6, lines 16-21). It would have been obvious to a person of ordinary skill in the art to recognize that Caine discloses as recited in claim 24 (a), claim 24 (b) and claim 24 (c) as claimed (by virtue of the operation described at col. 2, lines 21-68 to col. 3, lines 1-68)

As to claims 33 and 38-41, Caine teaches a host computer 10 including internal memory and hard drive and floppy disc. It would have been obvious to a person of ordinary skill in the art to recognize that Caine discloses a digital storage medium for

storing programming instructions of first means, second means, third means and fourth means (by virtue of the operation described at col. 2, lines 21-24).

5. Claims 42-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caine (US 5,361,078) in view of Zenda (US 5,559,525).

As to claims 42-48, Caine teaches all of the claimed limitations of claim 42, except for coupling module and a coupling controller. However, Zenda teaches Zenda teaches an analog switch 97 (a coupling module) receives the control signals LP, FP, PCLK, and WCLK from the first display controller 87, and outputs them when the ZENSEN signal is at high level. The output terminals of the analog switch 97 are set in a high impedance state when the ZENSEN signal is at low level. The control signals supplied from the analog switch 97 are wired-ORed with control signals supplied from the Z connector 105, and are supplied to the color LCD controller 95 (col. 8, lines 20-27). It would have been obvious to a person of ordinary skill in the art to provide an analog switch 97 taught by Zenda in the multi display of Caine's system because this would allow the user to set up and select the different resolution of the multiple display screen.

As to claims 49-55, Zenda teaches a switch circuit (93, 97, 101, ZENSEN), connected to the first graphics subsystem (87, 93), the connectors (103, 105) and the second graphics subsystem (109, 111), for supplying the data from either the first graphics subsystem or second graphics subsystems to the flat panel display unit means (91, 95); wherein the switch circuit (93, 97, 101, ZENSEN) supplies the data from the second graphics subsystem (109-113) to the flat panel display unit means (91, 95)

when the second graphics subsystem (109-113) is connected to the portable computer (see col. 3, lines 9-19). It would have been obvious to a person of ordinary skill in the art at the time of the invention to recognize that Zenda discloses the images, which defined by data, and signals supplied from the different graphics subsystem can be displayed on a flat panel display unit switchingly or alternatively. Additional advantages and modifications will readily occur to those skilled in the art. Therefore, the invention in its broader aspects is not limited to the specific details, and representative devices shown and described herein. Accordingly, various modifications may be made without departing from the spirit or scope of the general inventive concept as defined by the appended claims and their equivalents (see col. 15, lines 6-15 of Zenda).

Response to Arguments

6. Applicant's arguments filed 6/4/2001 have been fully considered but they are not persuasive.

Applicant's arguments with respect to claims 24, 29-32, 33, 38-55 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kevin M. Nguyen** whose telephone number is **703-305-6209**. The examiner can normally be reached on M-F (9:00-5:00), with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard Hjerpe** can be reached on **703-305-4709**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

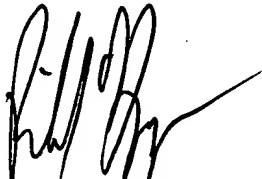
(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered response should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Kevin M. Nguyen
Examiner
Art Unit 2674

KN
November 27, 2001



RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600